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UNITED NATIONS DEVELOPMENT PROGRAMME

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ENGLISH

APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF
CUBA

IPF:(1992-96) $10 903 000

(CUB/91/001) - Pilot Plant for Antibiotics Production by Means of Fermentation

Date of approval by the AC:[1/]	18 December 1991
Expected duration:	Five years
Proposed executing agency:	Government
Government implementing agency:	Centro de Quimica Farmaceutica
Proposed UNDP contribution:	$ 1 875 000 Source of funds: IPF
Total UNDP budget:	$ 1 875 000

Project background

The development of an integrated health system capable of providing medical services to the population has been a clear achievement of Cuba's Government. As a result of increased health coverage, there has been a corresponding increase in the demand for medicines. Presently, the country consumes (US)$ 100 million annually in medicines. (US)$ 30 million of this constitutes antibiotics, the entire quantity being imported into the country. 85 percent of these antibiotics are imported in raw material form and then processed in Cuba; and the remaining are imported directly in finished form.

The Government's strategy is to develop the pharmaceutical industry so as to achieve self-sufficiency in the production of antibiotics, meet the high domestic demand, and expand production for export in the future. In this framework, the Fifth Country Programme, approved by the July 1991 Governing Council, establishes as one of its objectives the promotion of scientific and technical programmes related to biotechnology and pharmaceuticals, with a view to increasing the production of new products for domestic consumption and export.

Cuba is now at an initial phase in its development of antibiotics. UNDP provided assistance to the Government under the project (CUB/86/009) Antibiotics Microplant for the development of technologies at the laboratory scale. As one of the results, the project determined the basis for the construction of the pilot plant and defined the technologies and equipment necessary to upscale the production of antibiotics. The Government has

[1/] **This Fact Sheet reflects the status of the project/revision at the time it was approved by the Action Committee; modifications to the project/revision may have occurred subsequently.**

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decided to establish a pilot plant for the small-scale production of antibiotics as an interim step towards full industrial exploitation. Within this context, the Government of Cuba requested UNDP assistance to advance the production of antibiotics within the Centro de Quimica Farmaceutica, the principal center for research and pilot production of the pharmaceutical industry, which is currently under construction.

Description of project

The development objective of the project is to continue the production of antibiotics.

The immediate objectives of the project are to: (a) operationalize the pilot plant once its construction is completed; (b) propel the industry from an experimental into a production phase; and (c) assimilate relevant technologies which will: (i) advance the production of selected antibiotics (via fermentation) using indigenous raw materials; (ii) produce precursors for the production of penicillin and other similar antibiotics; (iii) carry out feasibility studies for the industrial production of certain antibiotics needed to meet domestic demand and develop an export market; and (iv) create a multidisciplinary work group in the fields of natural and technical sciences for the development of antibiotics production techniques.

Projecy activities will include: (a) creation of facilities and development of technologies for the production of antibiotics; (b) increasing the supply of antibiotics for domestic consumption and export; and (c) developing the scientific and technical capacity of the involved staff.

Inputs

UNDP will provide international experts (10 work-months); training in the areas of microbiology, genetics, fermentation technologies, and extraction processes (125 work-months); a subcontract for antibiotics production; and equipment to do with fermentation, sterilization and centrifuge machinery.

Financial data

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Personnel	112 300
Subcontract	175 000
Training	443 700
Equipment	1 115 000
Miscellaneous	29 000
Total	1 875 000

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